

CLAIMS

What is claimed is:

1 1. A system comprising:
2 a system board comprising an embedded small computer system interface (SCSI)
3 controller configured to provide cableless control in each of a simplex mode of
4 operation and a duplex mode of operation and wherein the system board
5 comprises a first channel bus and a second channel bus;
6 a backplane comprising a plurality of connectors configured to couple SCSI devices to
7 the backplane; and
8 a cableless element configured to couple the backplane to the system board and
9 configured to facilitate the exchange of control signals and power signals
10 between the system board and the backplane in each of the simplex mode of
11 operation and the duplex mode of operation.

1 2. The system, as set forth in claim 1, wherein the system board comprises a mode
2 control device adapted to configure the system to operate in one of the simplex mode of
3 operation and the duplex mode of operation, in response to a request.

1 3. The system, as set forth in claim 2, wherein the system board comprises a
2 plurality of switches coupled to the mode control device, wherein each of the plurality of
3 switches is adapted to reconfigure at least one of the first channel bus and the second channel
4 bus.

1 4. The system, as set forth in claim 1, wherein the system board comprises a
2 plurality of terminators each configured to terminate at least one of the first channel bus and
3 the second channel bus when the terminator is enabled.

1 5. The system, as set forth in claim 1, wherein the backplane comprises a plurality
2 of drive connectors configured to couple disk drives to the backplane.

1 6. The system, as set forth in claim 1, wherein the backplane comprises a plurality
2 of terminators, wherein each of the plurality of terminators is configured to terminate one of
3 the first channel bus and the second channel bus when the terminator is enabled.

1 7. The system, as set forth in claim 1, wherein the backplane comprises external
2 control connectors configured to couple external SCSI controllers to the backplane.

1 8. The system, as set forth in claim 1, wherein the cableless element comprises a
2 board-to-board connector.

1 9. The system, as set forth in claim 8, wherein the board-to-board connector
2 comprises a 200-pin connector.

1 10. A system comprising:
2 a small computer system interface (SCSI) system comprising a first bus channel and a
3 second bus channel, wherein the SCSI system is configured to selectably
4 operate in each of a simplex mode and a duplex mode without implementing
5 cables, and wherein the SCSI system is configured to selectably implement each
6 of a embedded SCSI controller and one or more external SCSI controllers; and
7 one or more SCSI devices coupled to the SCSI system.

1 11. The system, as set forth in claim 10, wherein the SCSI system comprises:
2 a system board comprising an embedded SCSI controller;
3 a cableless element coupled to the system board; and
4 a backplane coupled to the cableless element, wherein the one or more SCSI devices are
5 coupled to the SCSI system through the backplane.

1 12. The system, as set forth in claim 11, comprising mode control logic configured
2 to connect and disconnect each of the first bus channel and the second bus channel depending
3 on whether the simplex mode or the duplex mode is selected.

1 13. The system, as set forth in claim 11, wherein the system board comprises a
2 plurality of bus switches adapted to configure the first bus channel and the second bus channel
3 depending on whether the simplex mode or the duplex mode is selected.

1 14. The system, as set forth in claim 11, comprising one or more external SCSI
2 controllers coupled to the backplane.

1 15. The system, as set forth in claim 10, wherein the SCSI system comprises a
2 plurality of terminators configurable to terminate the first bus channel and the second bus
3 channel.

1 16. A system for implementing a simplex mode of operation and a duplex mode of
2 operation, the system comprising:
3 a first small computer system interface (SCSI) channel comprising a first bus, wherein
4 the first bus is coupled between an embedded SCSI controller on a system board
5 and a first external control connector on a backplane;

6 a second small computer system interface (SCSI) channel comprising a second
7 bus, wherein the second bus is coupled between the embedded SCSI controller
8 on the system board and a second external control connector on a backplane;
9 and
10 wherein the backplane is coupled to the system board through a cableless element.

1 17. The system, as set forth in claim 16, wherein one or more SCSI devices are
2 coupled to the first bus, and wherein one or more SCSI devices are coupled to the second bus.

1 18. The system, as set forth in claim 16, comprising a bus switch configured to
2 couple the first bus to the second bus to form a single bus when the system is implementing a
3 simplex mode of operation.

1 19. The system, as set forth in claim 18, wherein the embedded SCSI controller is
2 coupled to the single bus at a point other than an end of the single bus.

1 20. The system, as set forth in claim 16, comprising a plurality of terminators each
2 configured to terminate one of the first bus and the second bus.

1 21. The system, as set forth in claim 16, wherein the embedded SCSI controller
2 comprises a first embedded SCSI controller coupled to the first bus and a second embedded
3 SCSI controller coupled to the second bus.

1 22. The system, as set forth in claim 16, comprising a plurality of switches adapted
2 to configure each of the first bus and the second bus depending on whether the simplex mode
3 of operation or the duplex mode of operation is implemented, and depending on whether the
4 embedded SCSI controller is implemented or one or more external SCSI controllers are
5 implemented.

1 23. A method comprising:
2 selecting one of a simplex mode of operation and a duplex mode of operation in a small
3 computer system interface (SCSI) system, wherein the SCSI system comprises a
4 backplane coupled to a system board through a single cableless element; and
5 configuring each of a first bus and a second bus in the SCSI system based on the
6 selected mode of operation, wherein the first bus is coupled to one or more first
7 SCSI devices and wherein the second bus is coupled to one or more second
8 SCSI devices.

1 24. The method, as set forth in claim 23, comprising:
2 selecting the simplex mode of operation;

3 coupling a first end of the first bus to an embedded SCSI controller without
4 implementing cables;
5 coupling a middle portion of the first bus to a middle portion of the second bus without
6 implementing cables; and
7 terminating each of the ends of the first bus and the second bus.

1 25. The method, as set forth in claim 24, comprising operating in the simplex mode
2 of operation under the control of the embedded SCSI controller.

1 26. The method, as set forth in claim 23, comprising:
2 selecting the duplex mode of operation;
3 coupling a first end of the first bus to an embedded SCSI controller without
4 implementing cables;
5 coupling a first end of the second bus to the embedded SCSI controller without
6 implementing cables; and
7 terminating each of the ends of the first bus and the second bus.

1 27. The method, as set forth in claim 26, comprising operating in the duplex mode
2 of operation under the control of the embedded SCSI controller.

1 28. The method, as set forth in claim 23, comprising:

2 selecting the simplex mode of operation;
3 coupling an external SCSI controller to a first end of the first bus through an external
4 control connector on the backplane;
5 coupling a middle portion of the first bus to a middle portion of the second bus without
6 implementing cables; and
7 terminating each of the ends of the first bus and the second bus.

1 29. The method, as set forth in claim 28, comprising:
2 disconnecting an embedded SCSI controller without implementing cables; and
3 operating in the simplex mode of operation under the control of the external SCSI
4 controller.

1 30. The method, as set forth in claim 23, comprising:
2 selecting the duplex mode of operation;
3 coupling a first external SCSI controller to a first end of the first bus through a first
4 external control connector on the backplane;
5 coupling a second external SCSI controller to a first end of the second bus through a
6 second external control connector on the backplane;
7 terminating each of the ends of the first bus and the second bus.

1 31. The method, as set forth in claim 30, comprising:
2 disconnecting an embedded SCSI controller without implementing cables; and

3 operating in the duplex mode of operation under the control of the first external SCSI
4 controller and the second external SCSI controller.

1 32. The method, as set forth in claim 23, comprising:
2 selecting the duplex mode of operation;
3 coupling an external SCSI controller to a first end of the first bus through an external
4 control connector on the backplane;
5 coupling an embedded SCSI controller to a first end of the second bus without
6 implementing cables; and
7 terminating each of the ends of the first bus and the second bus.

1 33. The method, as set forth in claim 32, comprising:
2 operating in the duplex mode of operation, wherein the first SCSI devices coupled to
3 the first bus operate under the control of the external SCSI controller, and
4 wherein the second SCSI devices coupled to the second bus operate under the
5 control of the embedded SCSI controller.

1 34. A small computer system interface (SCSI) system comprising:
2 means for cablelessly coupling a backplane to a system board; and
3 means for configuring each of a first bus and a second bus in the SCSI system to
4 operate in one of a simplex mode of operation and a duplex mode of operation.